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23432 7590 11/10/2009 COOPER & DUNHAM, LLP 30 Rockefeller Plaza 20th Floor NEW YORK, NY 10112			EXAMINER SAVAGE, JASON L	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Art Unit: 1794

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 12 and dependent claims 2-11 and 13-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 12, the limitation of “a substantial part” is indefinite since it is not clear what constitutes “substantial”. The claim has been interpreted as meaning -- wherein at least some of the Mg and Si in the sheet metal alloy are present as separate Mg₂Si and Si particles in order to prevent artificial ageing--.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Warblicher et al (US 3,816,190).

Art Unit: 1794

Warblichler teaches an extruded AlMgSi component which is subjected to a heat treatment to form fine particle precipitates of Mg and Si thus providing a sheet having improved processability (col. 1, ln. 16-40). As such Warlichler would anticipate the limitation that Mg and Si are present as the claimed particles to prevent artificial ageing. In the alternative, if there is a difference between the prior art and that which is claimed, it would have been minor and obvious.

Warblichler further teaches that the AlMgSi alloy may have Si between 0.3-0.7, Mg 0.4-0.9, Fe 0.4, Mn 0.3, Cr 0.05 which overlaps the claimed compositions in claim 2.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gulotti et al (US 3,990,922)

Gulotti teaches an AlMgSi billet sheet containing Mg₂Si particles (col. 2, ln. 38-49) and thus would anticipate the limitation that Mg and Si are present as the claimed particles to prevent artificial ageing. In the alternative, if there is a difference between the prior art and that which is claimed, it would have been minor and obvious.

Gulotti further teaches that the AlMgSi alloy comprises Si between 0.4 to 0.8, Mg 0.8-1.2, Cu 0.15-0.40, Cr 0.04-0.35, Fe up to 0.7, Mn up to 0.15, Zn up to 0.25, Ti up to 0.15 and others individually up to 0.05 the total being up to 0.15 (col. 2, ln. 55-64) which overlaps the compositions of claim 2 wherein the Mg content is 0.8 wt%.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Azuma et al (JP 09-067659)

Art Unit: 1794

Azuma teaches an extruded AlMgSi component containing Mg₂Si particles from a pre-ageing treatment (abs) and thus would anticipate the limitation that Mg and Si are present as the claimed particles to prevent artificial ageing. In the alternative, if there is a difference between the prior art and that which is claimed, it would have been minor and obvious.

Regarding claim 2, Azuma further teaches that the AlMgSi alloy comprises Si between 0.2 to 0.6, Mg 0.45-0.9, Cu 0.10, Fe 0.35, Mn 0.10, Cr 0.10, Zn 0.10, Ti 0.10 (Col. 1, table at the bottom) which overlaps the compositions wherein the Si content is 0.6 wt%.

Regarding claims 3-6 and 8-9, Azuma teaches the recited elements in amounts which overlap the claimed ranges.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Timm et al (CA 2 363 116).

Timm teaches forming a high strength extruded AlMgSi sheet component. Timm further teaches that care must be taken during processing for if the cooling rate is too slow, Si and Mg₂Si particles precipitate (p. 3, ln. 4-15). While Timm teaches that the precipitation of these particles is not desirable, it is still a disclosure that an AlMgSi sheet containing the recited particles was formed and thus would anticipate the claim limitations. In the alternative, if there is a difference between the prior art and that which is claimed, it would have been minor and obvious.

Art Unit: 1794

Timm further teaches that the AlMgSi alloy comprises Si between 0.5 to 0.8, Mg 0.4-0.65, Cu 0.05-0.20, Fe 0.05-0.20, vanadium at a maximum of 0.20 and Mn at a maximum of 0.10 which overlaps and anticipates the compositions in claims 2-9.

Regarding claims 10-11, Timm teaches the sheet is used to form a vehicle automobile body parts such as structural components like doors which is formed by deep drawing and bending and thus would meet the claim limitations (p. 1, ln. 22-34).

Claim Rejections - 35 USC § 103

Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al (JP 09-067659)

Regarding claim 7, Azuma teaches a AlMgSi alloy which substantially overlaps the claimed composition with the exception of Fe being within 0.05-0.20. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to have recognized that similar AlMgSi alloys including those having a slightly lower iron content compared to alloy explicitly recited by Azuma could be employed with a reasonable expectation of success.

Regarding claims 8-9, Azuma teaches the recited elements in amounts which overlap the claimed ranges.

Regarding claim 10-11, although Azuma does not recite that the AlMgSi component is a panel of the claimed automotive components, extruded AlMgSi materials such as formed by Azuma are known to be suitable for use in the claimed components. It would

Art Unit: 1794

have been obvious to have used the component of Azuma to form automotive components having improved strength.

Response to Arguments

Applicant's arguments filed 6-26-09 have been fully considered but they are not persuasive.

The 112 Rejections

Applicant states that the Examiner's interpretation of the meaning of "a substantial part" in claims 1 and 12 as "the (emphasis added) Mg and Si in the sheet metal alloy are present as separate Mg_2Si and Si particles to prevent artificial aging" is correct. However, Applicant appears to have misunderstood the interpretation by the Examiner as the Examiner only intended to mean that at least some of the Mg and Si in the sheet metal alloy are present as separate Mg_2Si and Si particles. It is unclear from Applicant's response whether "the" Mg and Si referenced means all of the Mg and Si elements in the alloy are present as precipitates, or if there is a certain amount of Mg and Si present in precipitate form. As such, the claims are still rejected as being indefinite since it is not clear what level of the Mg and Si in precipitate form constitutes "substantial".

The 102/103 Anticipation/Obviousness Rejections

Applicant asserts that the references cited by the Examiner relate to a completely technical field stating Extrusion technology is quite different from sheet processing (hot

Art Unit: 1794

rolling) and a person of ordinary skill would of course not be informed by documents dealing with extrusion processing or see therein any useful information on how to make a rolled sheet.

This argument is not commensurate in scope with the claims as first there are no limitations drawn to hot rolling and second, the claims are drawn to an article, not the method(s) of making. Furthermore, The prior art such as Timm (CA 2 363 116), Yoshihara et al (EP 0 997 547) both explicitly recite the use of the extrusion formed aluminum alloy as components/sheets for automobile body parts. As such, the assertion that prior art which forms the claimed article by an extrusion process does not relate to the claimed technical field of sheet metals for use as automobile body parts is not persuasive.

Applicant argues that although Warblicher's process forms an article having finer particles based on MgSi; the article of Warblicher would necessarily be reheated of the formed article prior to extruding, extruding and further cooling down of the extruded material and a subsequent ageing step. Applicant further asserts that the disclosure the fine precipitates serve as a nucleus for precipitation would indicate to one of ordinary skill would expect a significant precipitation strengthening to occur in later process steps. However, it is clear the Warblicher teaches forming precipitates of at least Mg_2Si , which as disclosed by Applicant would reduced and/or avoid some artificial ageing and thus is considered to meet the claim limitations.

Applicant states that Yoshihara just discusses normal processing conditions for aluminum-magnesium-silicon extrudate. Applicant points to the tensile strength data in

Art Unit: 1794

Table 3 stating the recited levels would not be possible if there had been little or no artificial aging. It is noted that the only disclosure for forming Mg_2Si in Yoshihara is during an aging treatment therefore the rejection has been withdrawn (par[0029]).

Applicant argues that Azuma addresses precipitation of Mg_2Si through ageing treatment, rather than avoiding or limiting such precipitation in a manner according to the invention. To the contrary, Azuma explicitly teaches forming the precipitates prior to ageing in a pre-ageing treatment which are subsequently grown in the subsequent aging treatment. As such at least some of the Mg and Si in the metal alloy would be present as Mg_2Si which would avoid some artificial ageing as claimed.

Applicant asserts Timm seeks to optimize the precipitation of Mg_2Si through ageing treatment and does not attempt to avoid the ageing treatment. While it is noted that Timm teaches away from employing process parameters which would form the precipitates prior to age hardening, the disclosure that employing a slower cooling rate after a homogenizing treatment forms the precipitates of Mg_2Si and Si such as on page 3 of the reference is still a teaching of forming an article having Si and Mg in the form of the claimed precipitate alloys and thus meets the article limitation.

Applicant asserts that despite Gulotti teaching the formation of large precipitates of Mg_2Si so that they do not re-dissolve during processing, the fact that the article exhibits high mechanical properties would demonstrate that significant ageing would have taken place. However, Gulotti's article would contain Si and Mg in the claimed precipitate phases and thus meet the claim limitation.

It is noted that Applicant asserts in multiple arguments that any aging occurring in the articles formed by the prior art is evidence it would not anticipate or render the claimed invention obvious. However the present claims do not exclude some artificial ageing occurring, only that the Mg_2Si and Si particle phases contribute to avoiding some of the artificial aging that would occur if the particles were not present.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/
Examiner
11-6-09

/Jennifer McNeil/

Supervisory Patent Examiner, Art Unit 1794